

ORDER FOR SUPPLIES OR SERVICES

PAGE 1 OF 1 PAGES

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

1. DATE OF ORDER April 10, 1987	2. CONTRACT NO. (If any)	3. ORDER NO. 7Y0530GGBX	4. REQUISITION/REFERENCE NO. PO-135 PE0261
5. ISSUING OFFICE (Address correspondence to) U.S. Environmental Protection Agency 1200 Sixth Avenue MD-105 Seattle, WA 98101-3188		6. SHIP TO: (Consignee and address, ZIP Code) U.S. Environmental Protection Agency LDWSF 1200 Sixth Avenue ES-098 Seattle, WA 98101-3188 ATTN: Matta, Mike	


12.3.55 v1
04/10/87

7. TO: CONTRACTOR (Name, address and ZIP Code) Auke Bay Laboratory National Oceanic and Atmospheric Administration P.O. Box 210155 Auke Bay, Alaska 99821 ATTN: Dr. Jeff Short	8. TYPE OF ORDER <input checked="" type="checkbox"/> A. PURCHASE — Reference your _____ Please furnish the following on the terms and conditions specified on both sides of this order and on the attached sheets, if any, including delivery as indicated. This purchase is negotiated under authority of: <input type="checkbox"/> B. DELIVERY — Except for billing instructions on the reverse, this delivery order is subject to instructions contained on this side only of this form and is issued subject to the terms and conditions of the above-numbered contract.
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9. ACCOUNTING AND APPROPRIATION DATA 6870200 PE0261 7A4E10P00C 25.32 \$750.00	10. REQUISITIONING OFFICE U.S. EPA Region 10
11. BUSINESS CLASSIFICATION (Check appropriate box(es)) <input type="checkbox"/> SMALL <input checked="" type="checkbox"/> OTHER THAN SMALL <input type="checkbox"/> DIS-ADVANTAGED <input type="checkbox"/> WOMEN-OWNED	12. F.O.B. POINT Destination
13. PLACE OF INSPECTION AND ACCEPTANCE	14. GOVERNMENT B/L NO.
15. DELIVER TO F.O.B. POINT ON OR BEFORE (Date) June 17, 1987	16. DISCOUNT TERMS Net 30

17. SCHEDULE (See reverse for Rejections)

ITEM NO. (A)	SUPPLIES OR SERVICES (B)	QUANTITY ORDERED (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)	QUANTITY ACCEPTED (G)
1	Analyses of sediment samples for Organotins. (Marine Power & Equip.) NOTE: Watson will contact lab. Dr. Snyder should be contacted by phone prior to sending samples. Dr. Jeff Short is chemist who will run samples. Telephone (907) 789-6065	6	ea	125.00	\$ 750.00	

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18. SHIPPING POINT	19. GROSS SHIPPING WEIGHT	20. INVOICE NO.	17(H). TOT. (Cont. pages)
21. MAIL INVOICE TO: (Include ZIP Code) U.S. Environmental Protection Agency, 1200 Sixth Avenue, M MD-109, Seattle, WA 98101-3188 ATTN: Gary Hansen		\$ 750.00	17(I). GRAND TOTAL

22. UNITED STATES OF AMERICA BY (Signature) 	23. NAME (Typed) Brenda L. Mirasol	TITLE: CONTRACTING/ORDERING OFFICER
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EPA Procurement Request/Order		1. Name of Originator Michael Watson P0135		2. Date of Requisition 3/12/87			
		3. Mail Code ES-098	4. Telephone Number (206) 442-1072	5. Date Item Required ASAP			
6. Signature of Originator <i>Michael Watson</i>				7. Recommended Procurement Method <input type="checkbox"/> Competitive <input type="checkbox"/> Other than full and open competition <input checked="" type="checkbox"/> Sole source small purchase			
8. Deliver To (Project Manager) Matta/Boys - EPA - 1200		9. Address Sixth Ave. Seattle, Wa. 98101		10. Mail Code ES-098	11. Telephone Number 442-1072		
12. Financial Data (a) Appropriation 6870200				NOTE: Item 12 (c) Document Type—Contract = "C," Purchase Order = "P," IGA = "A," Other (Misc.) = "X"			
FMO Use (b) (13 digits)		Document Control Number (d) (6 digits)	Account Number (e) (10 digits)	Object Class (f) (4 digits)	Amount (g) Dollars Cents		
		PEO261	7A4E10P00C	2532	750 00		
13. Suggested Source (Name, Address, ZIP Code, Phone/Contact) Dr. George Snyder, Director - Auke Bay Lab. NMFS, NOAA P.O. Box 210155, Auke Bay, Alaska 99821			14. Amount of money committed is: <input checked="" type="checkbox"/> Original <input type="checkbox"/> Increase <input type="checkbox"/> Decrease	15. Contracting office is authorized to exceed amount shown by 10% <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
			16. Servicing Finance Office Number 10				
(907) 789-6065 17. Approvals							
a. Branch/Office William P. Schmitt Chief, Fld. Ops. & Tech. Sup. Br.		Date 4/1/87		d. Property Management Officer/Designee <i>[Signature]</i> Date 4-3-87			
b. Division/Office <i>[Signature]</i> Director, Env. Svcs. Div.		Date 2 APR 87		e. Other (Specify) <i>[Signature]</i> Date 3 Apr 87			
c. Funds listed above are available and reserved <i>Mary A. Moore</i>		Date 4/2/87		f. Other (Specify)			
18. Date of Order	19. Order Number	20. Contract Number (if any)		21. Discount Terms			
22. FOB Point		23. Delivery to FOB Point by On or before (Date)		24. Person Taking Order/Quote and Phone No.			
25. Contractor (Name, address, ZIP Code)		26. Type of Order <input type="checkbox"/> a. Purchase		Reference your quote (See block 24)			
		Please furnish the above on the terms specified on both sides of this order and on the attached sheets, if any, including delivery as indicated.					
		<input type="checkbox"/> b. Delivery provisions on the reverse are deleted. The delivery order is subject to the terms and conditions of the contract. (See Block 20)					
		c. <input type="checkbox"/> Oral <input checked="" type="checkbox"/> Written <input checked="" type="checkbox"/> Confirming					
27. Schedule							
Item Number (a)	Supplies or Services (b)	Quantity Ordered (c)	Unit (d)	Estimated Unit Price (e)	Unit Price (f)	Amount (g)	Quantity Accepted (h)
1.	Analyses of sediment samples for <u>Organotins</u> . (Marine Power & Equip. NOTE: Watson will contact lab. Dr. Snyder should be contacted by phone prior to sending samples. Dr. Jeff Short is chemist who will run samples. Telephone (907) 789-6065	6	ea.	125.00			
					Total \$		
28. United States of America By (Signature)				29. Typed Name and Title of Contracting Officer			

The scope of work for this purchase order will be for the NOAA Auke Bay Laboratory to perform detailed chemical analyses for the presence and speciation of organotin compounds. At present, EPA's Manchester Laboratory is not fully equipped and geared up to perform this type of analysis. This work will be performed on six (6) samples of sediment obtained in the course of EPA Region 10's Marine Power and Equipment investigation(s). Three of the samples are sediment from the Lake Union facility of Marine Power and Equipment, and three are from their facility on the lower Duwamish River. Each of the six samples is a composite of three subsamples taken by VanVeen grab sampler. All samples were taken specifically for organotin analysis, and have been maintained in frozen condition at the EPA Manchester Laboratory since their collection earlier this year. It is our understanding that this analysis will provide accurate information about the type and quantities of various organotin compounds which may be present in the samples, and the cost will be approximately \$125 per sample.

January 8, 1987

M/S 329

Possibility of Analyzing Organo-Tin at NOAA's Auke Bay Laboratory

Michael Watson, Regional Toxicologist
Field Operations & Technical Support Branch

William E. Schmidt, Chief,
Field Operations and Technical Support Branch

On 7 January, 1987, I telephoned NOAA's Auke Bay Laboratory near Juneau, Alaska, and discussed the general issue of organotins in fish tissue and sediment samples with Dr. Jeff Short. Telephone for Dr. Short is (907) 780-6065. Dr. Short and Dr. Frank Thrower of the Auke Bay lab have recently published a paper entitled "Accumulation of butyltins in muscle tissue of chinook salmon reared in sea pens treated with tri-n-butyltin". This paper was presented at the IEEE OCEANS '86 Conference in Washington, D.C., September 23-25, 1986. They are also preparing an upcoming paper on a screening method for organotins in fish muscle. Dr. Short related the following very interesting facts:

1. The equipment and instrumentation necessary to accurately analyze organotins has cost the Auke Bay lab in the vicinity of 80-90 thousand dollars. This is because the lab uses a procedure which involves "mating" an atomic absorption (AA) detector with a gas chromatograph (GC). This union took them about eight months to successfully design and implement, because a certain amount of trial and error is required to compliment the undeniable skill required for the splicing. The concept for using the AA/GC combination was originated by Dr. Jim McGuire of Environment Canada, who pioneered Canada's efforts at analyzing organotins in marine samples. Dr. Short feels that the AA/GC method, despite its difficulties, is the best method by far, although one could also use a flame photometric detector with the GC instead of utilizing AA as the detector.

2. The best source of information regarding state-of-the-art extraction and analysis methods for organotins is Volume 4 of the Proceedings from the OCEANS '86 conference referenced above. I would recommend that the Region 10 laboratory acquire this volume for future references. Other pioneers in the field of organotin analysis in marine samples include: (a) Dr. Ed D. Goldberg, Scripps Institution of Oceanography, La Jolla, CA 92043, telephone ((619) 534-2407, and (b) Dr. Robert J. Huggett, Virginia Institute of Marine Science, College of William and Mary, Gloucester Pt., VA 23062, telephone (804) 642-7236.

3. The Auke Bay laboratory has recently sampled the common mussel, Mytilus edulus, from several locations along the Pacific coast, including several sites in Puget Sound. According to Dr. Short, mussels from Puget Sound (especially from the area around the Duwamish) contain significantly high levels of organotin. These samples are currently being analyzed, and the study is not yet completed. He will send me the data when they become available.

4. (saving the best news for last) The Auke Bay laboratory is interested in any contractual arrangements which EPA or others may wish to consider regarding analysis of marine samples for organotins. Two levels of analysis are available. For \$25 per sample, we would receive a screening analysis which will tell us whether or not organically bound tin is present, and a rough estimate of quantity. For about \$125 per sample, the lab will provide us with an AA/GC confirmation of each species of organotin present, with much greater quantitative accuracy. He suggests that samples be screened first with the cheaper method, and any positive samples then be analyzed in greater detail by the AA/GC method. I should also mention that NOAA is apparently cutting back funding for most of their laboratories. Facilities such as Auke Bay, Montlake and similar labs are thus very interested in soliciting outside funding via contractual arrangements.

I suggest that someone from our laboratory contact Dr. Short and explore mutual interests. If tributyl tin samples (Marine Power sediments, edible resource monitoring in Puget Sound, etc.) could be contracted out on a very limited initial basis, it would give us time to better explore the feasibility of gearing up internally for this complex analytical method over the long run.

cc: Mike Johnston
Bob Rieck
Roy Arp
Kathy Krueger
Dave Terpening
Steve Brown
Dave Tetta
Dave Heineck

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